

REMARKS

In the Office Action of December 23, 2008, all claims were rejected as being obvious over Gough '143 or Gough '143 in view of Swanson.

In the Office action summary sheet and on the PAIRS, the action is designated non-final, however in the Examiner's comments the action is designated a first action final action. It is believed that this was inadvertently copied from a prior action. Since the prior response overcame some of the rejections and progress was made, it would seem that the action was non-final.

On March 3, an Interview was conducted with the Examiner. The Examiner's grant of an interview and time spent in the Interview are greatly appreciated.

It is emphasized that claims 1, 28 and 29 involve two support shafts and various two shaft configurations, whereas Gough is a single shaft configuration. The insulation sleeve 18 is only semi-rigid in Gough at col. 5, line 59, and does not function as a second support shaft. The insulation sleeve 18 is described in Gough in several places as "adjustable" but there is no disclosure that in regard to Fig. 8, that the sleeve 18 should be arranged so that the two electrode assemblies are set a predetermined distance apart as claimed in claim 1, subpara. (d) and claim 16, subpara. (c).

The last two Office actions take two positions and ask a key question regarding Gough '143 as follows:

Examiner's Query: The Office action of July 10, 2008 has also inquired as to why Applicants believes that Gough shows only an uninsulated metal shaft trocar 14.

Examiner's Position No. 1 is that Gough teaches that it would be desirable to insulate the trocar 14 to prevent current from heating the tissue adjacent the trocar should that be desirable. (Office action of July 10, 2008, page 3, end of first partial paragraph bridging from page 2.)

Examiner's Position No. 2 is that Fig. 8 of Gough would provide ablation of a 3-dimensional volume between electrodes 16' and 16' without rotation of the shaft 14 because it is the two sets of antennae define "an axially separated plane." (Office action of Dec. 23, 2008, page 2, first full paragraph.)

Reply to Examiner's Query:

First, Applicants respond that the embodiment of Gough Fig. 8 is consistent with Figs. 6A-6C. Fig. 6C shows that the trocar 14 is metal by the "equal line" shading pattern in the cross section denoting metal. The trocar 14 has only one thickness and no insulating jacket.

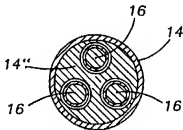


Fig. 6C, Gough '143 patent

Second, the specification of Gough '143 provides as follows:

Col. 5, line 61: "Trocar 14 is made of a stainless steel hypodermic tubing."

This may specifically refer to the embodiments of Figs. 1-5, however, no different material is specified for the embodiments of Figs. 6-8 and Fig. 6C shows metal.

Reply to Examiner's Position No. 1:

Still further Gough '143 provides is problematic in its description of energizing the assembly in the following passage at col. 8, lines 5-12:

Referring now to FIG. 5, a center of selected tissue mass 28 is pierced by trocar 14, antennas 16 are laterally deployed and retracted, trocar 14 is rotated, antennas 16 are deployed and retracted, and so on until a cylindrical ablation volume is achieved. Multiple antenna device 12 can be operated in the bipolar mode between the two antennas 16, or between a antenna 16 and trocar 14. Alternatively, multiple antenna device 12 can be operated in a monopolar mode. (Emphasis added.)

Gough '143 fails to mention, however, that if a voltage differential were to be applied across two axially spaced apart sets umbrellas electrodes 16, that the trocar 14 would have to be insulated. It is actually not certain that Gough '143 does in fact apply a bipolar signal across two

sets of two axially spaced apart sets of umbrellas electrodes 16, because the same numbers 16 or 16' are used for both sets of electrodes and Gough could instead simply be teaching that the voltage is being applied between electrodes 16 in the same plane. The passage is ambiguous and non-enabling as to the embodiments claimed in the present invention.

Rather than reading this language broadly to encompass Applicant's claim language as the Examiner does, Applicant would observe that the above language in Gough is not in fact, enabled under 35 USC 112, first paragraph, because Gough does not show in Fig. 10 how it is in fact connected to the antennas 16. Compare, for example, the electrical schematics provided in Figs. 2, 5 and 7 of the present application.

Where a limitation, such as the one claimed herein, is not enabled by the reference, rather construing the language of the reference broadly for 35 U.S.C. 103(a) purposes, the language will be construed narrowly as merely a "nice to have" feature and not an enabling disclosure. The teaching in Gough is incomplete for the purposes cited in the Office action. But even assuming the Examiner's position was the right one, Gough shows only a one shaft embodiment and no three element assemblies in Fig. 8 and no predetermined spacing along the trocar in Fig. 8, so a *prima facie* case on all of the claim limitations is not made out.

There is also no support in Gough '143 for the Examiner's Position No. 1 that Gough teaches that it would be desirable to insulate the trocar 14 to prevent current from heating the tissue adjacent the trocar.

Reply to Examiner's Position No. 2:

Whenever movement of the trocar is mentioned in the specification of Gough '143, Gough refers to rotating the trocar 14 in the patient to affect the geometry of the ablation or to other types of movements. An objective of the present invention is to eliminate the need for these movements.

Gough '143, Col. 4, lines 61-67:

Trocar 14 can be moved up and down, rotated about its longitudinal axis. and moved back and forth, in order to define, along with sensors, the periphery or boundary of the selected tissue mass, including but not limited to a tumor. This provides a variety of different geometries. not always symmetrical that can be ablated.

Gough '143, Col. 7, lines 58-67:

Trocar 14 can be rotated, with antennas 16 retracted in the lumen of trocar 14, and another ablation volume defined between the antennas 16 is created. Further, trocar 14 can be withdrawn from its initial position adjacent to selected tissue mass 28, repositioned to another position adjacent to selected tissue mass 28, and antennas 16 deployed to begin another ablation cycle. Any variety of different positionings may be utilized to create a desired ablation geometry for selected tissue mass of different geometries and sizes.

Gough '143, Col. 8, lines 5-9:

Referring now to FIG. 5, a center of selected tissue mass 28 is pierced by trocar 14, antennas 16 are laterally deployed and retracted, trocar 14 is rotated, antennas 16 are deployed and retracted, and so on until a cylindrical ablation volume is achieved. is achieved.

Applicants have maintained that Gough does not show or suggest an assembly with two sets of three electrodes defining axially spaced apart planes, bipolar energization to create a three-dimensional volume of ablation and an insulated shaft to prevent current drain from the area of ablation or excessive heating near the shaft.

It is respectfully asked what the Examiner means when it is stated in the Office action that the two sets of antennae in Fig. 8, define "an axially separated plane."

An axially separated plane is a two-dimensional plane and not a three-dimensional volume achieved without rotation. Fig. 8 does not show enough antennas 16 to define a three-dimensional volume achieved without rotation. It shows only two antennas 16' at the top and two antennas 16' at the top of insulation sleeve and it does not describe how these are specifically energized. The antennas 16' could each receive the same signal and trocar 14 could also be energized, as it appears to be a unitary, uninsulated metal shaft in the top portion.

During the Interview, it was mentioned by the Examiner that it wasn't clear whether the predetermined axial displacement was a function of the physician's manipulation or some other function.

It is intended that this predetermined axial displacement is prior to the physician's manipulation as discussed in paragraph 0018 of the present application. This has been clarified by a short amendment to claims 1 and 16.

The other amendment to claims 1 and 16 is for clarification of the insulation of the shafts between the two axial positions from which the antennas are deployed.

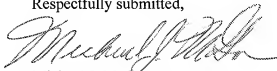
Claim 28 has been amended to recite a two-shaft configuration as illustrated in Fig. 3.

SUMMARY

No fee is believed to be due, but if the Director determines that any fee is to be due or any credit is due, authorization is hereby given to charge Boyle Fredrickson Deposit Account No. 50-1170.

In view of the Amendment and Remarks, reconsideration of the application is respectfully requested. After the amendment, claims 1-9, 13, and 16-22 and 28-29 are still pending, and a Notice of Allowance for these claims or an indication of allowable subject matter is earnestly solicited.

Respectfully submitted,



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